

# **“The Terms and Conditions Came Back to Bite”: Plain Language and Online Financial Content for Older Adults**

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**Abstract.** With financial institutions increasingly transferring products and services online, the interaction of older adults with the web has received some attention. However, research on the accessibility and usability of the language of online financial content for older adults is lacking. Furthermore, evidence on the potential benefits of plain language is needed. We conducted a two-part study to fill these research gaps. First, we conducted a focus group with four older adults to find out: (i) if participants had concerns about the accessibility of online financial texts; and (ii) which types of texts might have benefited from plain language editing in their experience. We observed that older adults regarded Terms and Conditions as difficult to read. In a second stage, we examined the usability of Terms and Conditions through an experiment with 25 older adults. We tested the impact of plain language on different usability components, namely satisfaction ratings, reading comprehension, perceived comprehensibility, and reading behaviour for Terms and Conditions related to direct debits provided by a bank and an insurance company. We found no benefits of plain language on the usability components under investigation. However, despite a general tendency to skim through or read only parts of Terms and Conditions, we also observed that reading behaviour was more varied—including repeated readings, section skipping, and reading abandonment—with texts that had not undergone plain language editing. Furthermore, aspects other than language (such as visual components) were valued by older adults. Conclusions and implications are outlined.

**Keywords:** Older Adults, Plain Language, Terms and Conditions.

## **1 Introduction**

Longer life expectancy and declining fertility rates have been leading to population ageing [30]. Despite some disagreement on when old age starts [25, 27], researchers, practitioners, and policymakers agree on the importance of considering the specific needs and challenges that ageing entails for all aspects of life and in all sectors of society, including the financial sector [5].

Information and communication technologies can play a role in ensuring that older people are not left behind and have access to products, services, and information [38]. In particular, the web has the potential to reach users (including older adults) regardless of their skills, abilities, and demographics [4]. Unsurprisingly then, financial institutions such as banks and insurance companies have been increasingly transferring their services and communications online [28, 42]. Despite obvious benefits, use of the web can also raise issues related to the user's abilities. In particular, older users might be at a disadvantage when accessing financial services and information online as a result of: a decline in financial literacy [20]; reduced cognitive abilities that might impact on their comprehension of texts [15]; or a general lack of familiarity with computers and/or the web [13].

The accessibility and usability of the language of online textual content for older people has received little attention, particularly as far as Terms and Conditions provided by financial institutions are concerned. Plain language—defined as communication that is comprehended the first time it is encountered, and that relies on textual features such as active voice and common terms [39]—is frequently advocated, but empirical evidence on its necessity and impact for older people in the online financial domain is lacking. This research gap is surprising when considering that “[u]sing the clearest and simplest language possible” is listed among the principles set forth by the Web Accessibility Initiative (WAI) [40].

Against this background, this article describes an exploratory study that answered the following research questions (RQs):

RQ1. How accessible (i.e. comprehensible) are online financial texts according to older people?

RQ2. Does plain language increase the usability of online financial texts for older people?

This article is organised as follows. After this introduction, we review related work. Subsequently, we report on the methodology that we adopted to answer our RQs. We then present the results, which are summarised and discussed in the conclusions.

## **2 Related Work**

### **2.1 Accessibility and Usability**

(Web) accessibility and (web) usability are related and partially overlapping notions, but their relationship is unclear [41]. A recent analysis of 50 definitions of web accessibility conducted by Petrie, Savva, and Power [33] led to the development of a unified definition in which web accessibility seems to coincide with usability. The same overlap between accessibility and usability is contained in ISO 9241-171 [23].

When referring to textual content, however, accessibility and usability have often been regarded as separate concepts. Accessibility is used as a synonym of readability or comprehensibility, particularly when referring to content written in plain language [2, 6]. Usability, on the other hand, is traditionally measured along the dimensions of

effectiveness, efficiency, and satisfaction when conducting tasks with specific textual content [12].

Since the focus of our study was on online textual content, we also treated accessibility and usability as separate, but only partially. Specifically, by *accessibility*, we referred to how difficult online financial texts were to comprehend; and by *usability*, we referred to how satisfied and effective older people were with online financial texts that had been written in plain language. We measured effectiveness in terms of various measures related to comprehension, hence the partial overlap with accessibility. We did not include efficiency in our assessment of usability.

## 2.2 (Web) Accessibility and Older People

There is a dearth of studies on the need for accessible language among older people using the web to deal with financial institutions. However, interactions of older people with the web for other purposes have been investigated in terms of accessibility and cognitive problems [10]. For instance, Sayago et al. [36] observed that difficulty in remembering steps and in comprehending computer jargon were accessibility barriers with strong impact.

Several web design guidelines and resources have been developed to make websites and applications accessible. In particular, the Web Content Accessibility Guidelines 2.0 are widely adopted in both research and practice [11], but they were developed having in mind users with disabilities rather than older people [36], and they have been shown to have shortcomings [31]. Abou-Zahra et al. [1] describe the WAI-AGE project, whose goal is to address some of the limitations of the web accessibility guidelines in relation to the needs of older people.

## 2.3 (Web) Usability and Older People

Usability in itself is a complex and multifaceted concept [16, 35]. Despite different definitions, there seems to be some agreement that the ability to conduct a task (with as little effort as possible) when using a product (including a text) is as important as the satisfaction experienced when using it [16]. A widely adopted definition of usability that encompasses these aspects is reported in ISO 9241-11 [24], paragraph 3.1.1: “extent to which a system, product or service can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use”. For the purpose of our study, and drawing upon previous research on textual content, we also adopted this definition.

Research on the usability of online financial texts (and on the impact of plain language) is lacking. However, the usability of websites and other information and communication technologies for older adults has received some attention [17, 32]. Furthermore, Rodrigues et al. [34] identified several usability and accessibility issues on frequently accessed websites, such as information overload and unclear terminology.

## 2.4 Terms and Conditions

Terms and Conditions play a key role in informing the signatory of a contract of their rights and obligations. Gaining informed consent to a contract should therefore require a thorough understanding of its Terms and Conditions [29]. However, customers have been found to misunderstand the specific conditions of their contracts or the extent of their rights [26]. Additionally, Terms and Conditions are rarely read (in their entirety) because of the effort required to understand contract terms [3]. Length, lack of time, and trust in the fairness of terms are also likely to discourage readers [22].

The language and readability of Terms and Conditions has received little attention [29]. Kvalnes [26] points out that drafting these documents in plain language can result in “a better ethical climate”, while Van Boom et al. [37] found that increased readability of insurance contract terms boosts consumers’ expectations of receiving cover. The application of plain language guidelines to Terms and Conditions can be beneficial, but might not lead to the desired level of usability and comprehensibility [9], possibly because contract terms can be simplified only up to a certain extent [19]. To the best of our knowledge, the main focus so far has been on the legal (rather than on the financial content) of Terms and Conditions. Moreover, the impact of plain language on the usability of this type of content for older people seems to be an under-researched area.

## 3 Methodology

Answering RQ1 (How accessible (i.e. comprehensible) are online financial texts according to older people?) represented a preliminary step, which was needed to find out: (i) if participants had concerns about the accessibility of online financial texts; and (ii) which types of texts they thought might have benefited from text simplification (i.e. plain language editing). To answer RQ1, we conducted a small focus group.

The data gathered through the focus group informed the set-up of the experiment conducted to answer RQ2 (Does plain language increase the usability of online financial texts for older people?). Specifically, after identifying concerns about the accessibility of online financial content (in particular, Terms and Conditions), we investigated the potential benefits of plain language on a set of usability components.

Details on the focus group and on the experimental study are provided separately in the two sections below. For the purpose of our study, we focused on participants aged 54 and older.

### 3.1 Focus Group

The focus group, which lasted about 80 minutes, was run at the researchers’ institution in April 2019, and was audio recorded. Four older people agreed to participate. The authors of this paper had prepared a list of topics to guide the focus group discussion. However, spontaneous topics were also encouraged during the focus group. One of the researchers acted as the moderator, while another took notes.

The coding and analysis of the transcribed interview data was conducted using a thematic analytical strategy described in Braun and Clarke [8], and was carried out with the NVivo software. Six themes were identified in the focus group discussion, namely: (i) communications from financial institutions; (ii) personal experiences with financial institutions; (iii) reading behaviour with financial information; (iv) trust in financial institutions; (v) response to change; and (vi) Terms and Conditions.

The focus group showed that participants had concerns about the accessibility of online financial content and found it difficult to comprehend at times. In addition, findings from the focus group showed that Terms and Conditions should be the object of plain language editing. Below we report an extract from the theme Terms and Conditions to back up this point:

*P03: The day-to-day things seem to be kind of straightforward and easy to understand. I... For me, I think, it's when you get into the terms and conditions, and particularly with regard to insurance policies, or opening accounts, or whatever... It's the language that's used there, and it's the interpretation of that language that's sometimes... Whether it's online or paper-based, that's where it can become difficult.*

Informed by the findings of the focus group, we selected Terms and Conditions from a bank and an insurance company as the texts to be used for our experimental study aimed to test the impact of simplification (or plain language editing) on text usability.

### 3.2 Experimental Study

**Operationalisation of Variables.** As already specified, by usability, we referred to how satisfied and effective older people were with online financial texts.

*Satisfaction.* We defined satisfaction as older people's opinions of: (i) the informativeness and helpfulness of the content; (ii) the understandability of the language; and (iii) the understandability of the content. Participants were asked to rate these aspects on a scale from 1 (lowest satisfaction) to 4 (highest satisfaction). Questions on satisfaction were taken from Castilho and Guerberof [12].

*Effectiveness.* Regarding effectiveness, ISO 9241-11 [24], paragraph 3.1.12, defines it as "the accuracy and completeness with which users achieve certain goals". For the purpose of this study, we defined effectiveness as older people's ability to reach goals related to comprehension. To this end, we develop our own questions to measure their reading comprehension, perceived comprehensibility, and reading behaviour with simplified Terms and Conditions (written in plain language) and non-simplified Terms and Conditions:

- Reading comprehension was measured through multiple-choice questions. Specifically, each text was followed by four multiple-choice questions;
- Perceived comprehensibility was measured by asking participants to indicate which text (between the simplified and the non-simplified) they found easier to read. Participants were also asked to indicate the reasons for their preference;

- Reading behaviour was assessed by asking participants to report whether, with each text presented to them, they would: (i) read it in its entirety; (ii) read some parts of it; (iii) skim through it; (iv) skip it altogether; (v) or other.

**Experimental Design and Procedure.** Twenty-five older people agreed to be involved in the experiment. Each participant took part in the experiment individually at the researchers' institution. We adopted a within-subjects design whereby each participant was asked to read and answer usability questions on two financial texts.

Participants were randomly assigned to either a treatment (N=13) or a control group (N=12). In the treatment group, each participant read a simplified text written in plain language and a non-simplified text. The difference in readability between the two texts, as determined by the Flesch Kincaid Grade Level formula, represented our independent variable and is reported in Fig. 1 below. Specifically, the simplified text had a lower Flesch Kincaid Grade Level (indicating higher readability), while the non-simplified text had a higher Flesch Kincaid Grade Level (indicating lower readability). The order of text presentation (simplified vs. non-simplified) was counterbalanced. Participants were also blinded to the design. In the control group, the two texts presented to each participant had a similar level of readability as determined by the Flesch Kincaid Grade Level formula (Fig. 1).

Participants also completed a background questionnaire and took part in a warm-up reading task. In addition, participants rated their familiarity with direct debits, since this was the topic of the texts used. All participants conducted the experimental tasks (reading and answering questions) using a computer. Only one participant did not feel comfortable using the keyboard, so he read the texts on the computer screen but then dictated the answers to one of the researchers, who typed them.

**Texts.** We selected extracts of Terms and Conditions provided by a bank and an insurance company on their websites, and dealing with the topic of direct debits, which are a common method of payment. The texts were in English and contained between 280 and 369 words. The specific terms and conditions set forth in the texts were different so as to avoid a learning effect. However, the same general topic of direct debit was selected to prevent topic knowledge from acting as a confounding variable.

After selecting the two online texts, one of the researchers manually checked them against the WAI [40] plain language guidelines and revised them accordingly. These guidelines address a broad range of readability issues, such as sentence/word length and structure, terminology, consistency, and cohesion. Fig. 1 shows readability scores (as per Flesch Kincaid Grade Level readability formula) before and after the implementation of plain language guidelines. It also displays how texts were matched for the treatment and the control group. We maintained the original formatting of the texts (e.g. in terms of font and layout) as displayed on the websites from which they were extracted.

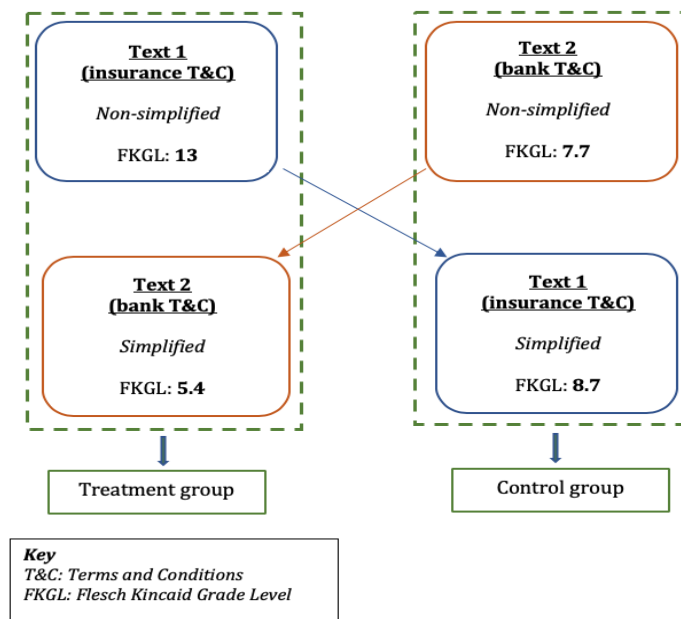


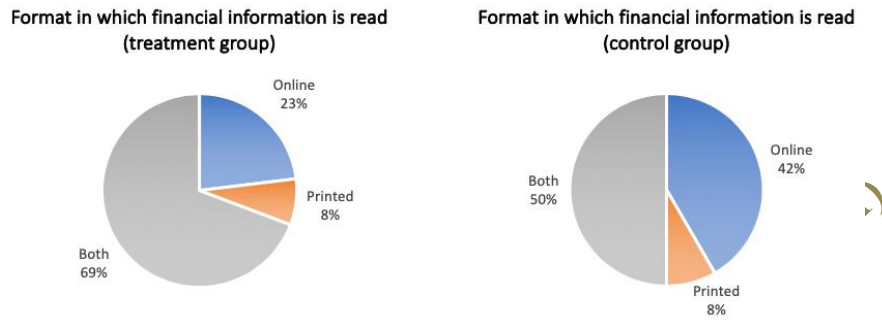
Fig. 1. Texts and experimental groups

## 4 Results

### 4.1 Background Characteristics of Experimental Participants

Our participants were aged between 58 and 84 years of age. The mean age of the participants in the treatment (N=13) and in the control group (N=12) was similar (mean=67 in the treatment group, and mean=69 in the control group). Participants varied in terms of highest education level, with most of them having either a secondary or a third-level education degree. As far as gender distribution is concerned, there were 11 female participants and two male participants in the treatment group, while the control group included seven male participants and five female participants. All participants held a bank account, and the vast majority of them were used to reading

financial information online (either online alone or in combination with printed information) (Fig. 2).



**Fig. 2.** Format in which financial information is read

In both the treatment and the control group, most participants reported reading information from their banks either always or often. There was more variability in terms of the frequency with which financial information from insurance companies was read. Most participants in both the treatment and the control group stated that they had an average level of financial knowledge. Regarding familiarity with computers, the majority of participants in both groups reported being either comfortable or very comfortable with them. As far as tablets and/or smart phones are concerned, fewer participants stated that they were very comfortable with them. Finally, participants in both the treatment and the control group were quite familiar with the topic of direct debits.

## 4.2 Satisfaction

We measured satisfaction by asking participants how strongly they agreed or disagreed with the three statements in Table 1 (first column), on a 4-point scale. We report the mode scores. In the treatment group, despite the fact that the simplified text had been revised substantially for plain language (Fig. 1), the mode values show that the satisfaction ratings provided by the majority of older participants on the simplified and non-simplified text were similar. Slight differences between the two texts were also observed in the control group.



**Table 1.** Satisfaction ratings from the treatment group

Measures (on a scale from 1 to 4)	Simplified text	Non-simplified text
<i>Informativeness and helpfulness of the text</i>	Mode=2	Mode=3
<i>Perceived understandability of the language</i>	Mode=2	Mode=2 and 3
<i>Perceived understandability of the content</i>	Mode=2	Mode=2

### 4.3 Effectiveness

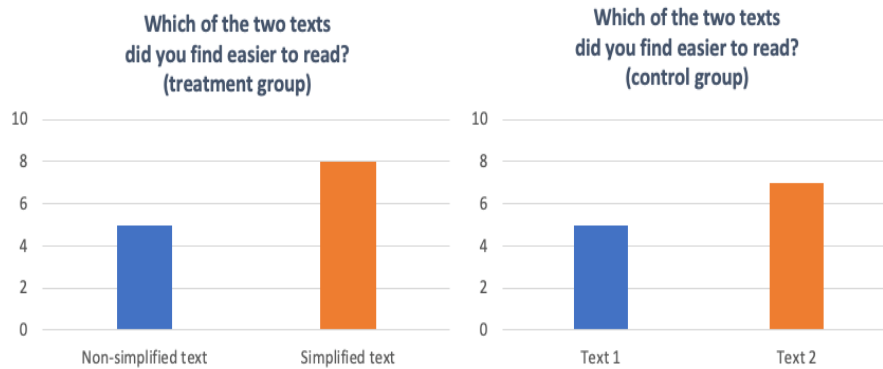
Effectiveness was defined in terms of achieved reading comprehension, perceived comprehensibility, and reading behaviour. Regarding reading comprehension, we assigned a score of 1 to the multiple-choice answers that participants answered correctly, and a score of 0 to wrong answers. There were no missing answers. Subsequently, we added up the scores to obtain a total score per participant, for each of the two texts read. Then we calculated the mean total score of all participants in each group, for each of the two texts read. Table 2 reports the mean scores (and standard deviation, SD) of all the participants in the treatment group, who read the simplified text and the non-simplified one. It can be observed that the adoption of plain language in the treatment group did not result in improved comprehension among our older participants.

**Table 2.** Treatment group's comprehension scores

Text	Comprehension scores
<i>Simplified</i>	Mean=3.08, SD=0.76
<i>Non-simplified</i>	Mean=3.08, SD=0.64

As far as perceived comprehensibility is concerned, we asked participants to indicate which of the two texts they found easier to read, and why. We observed that a slightly higher number of people in the treatment group selected the simplified text. However, a similar slight preference for one text over another was also observed in the control group (Fig. 3), suggesting that this slight preference for a text over another might not be due (exclusively) to decreased language difficulty. Specifically, in both the treatment and the control group, participants showed a preference for Text 2—it should be remembered that, while Text 2 was considerably more readable in the treatment group, in the control group its readability level was very similar to that of Text 1 (Fig.

1). Therefore, the results in Fig. 3 seem to indicate that some features of Text 2 (different from the readability level) might have acted as a confounding variable.

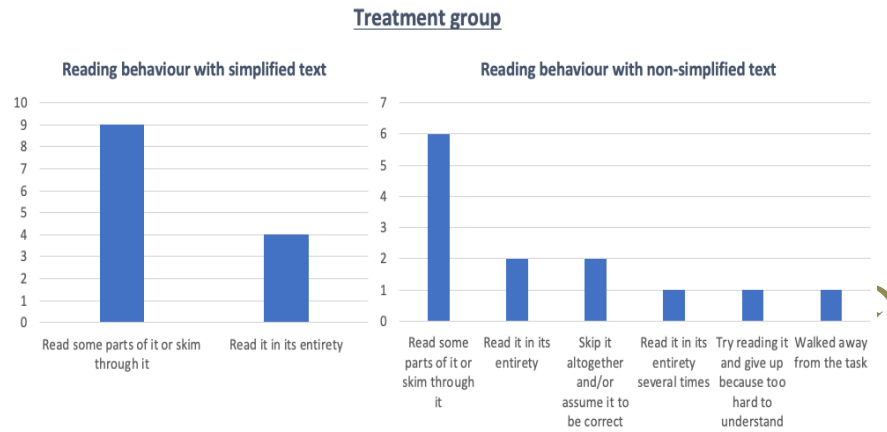


**Fig. 3.** Results on perceived comprehensibility

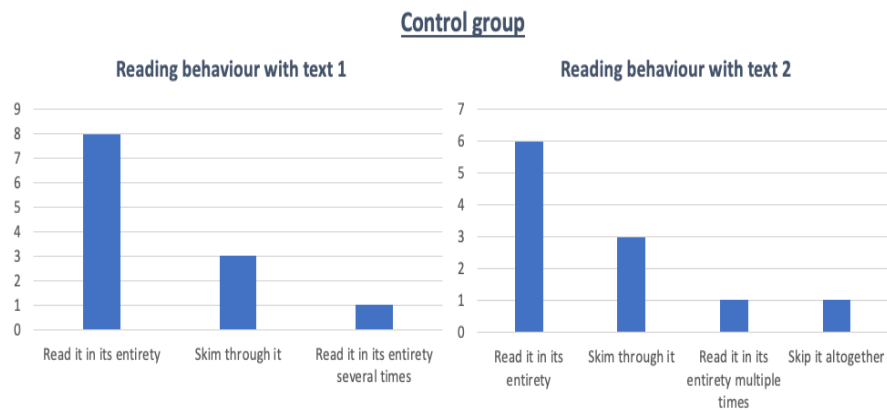
This claim that older people's preference for one text is not the result of language only seems to be supported by their answers regarding the reasons behind their preferences. More precisely, when asked why they found a text easier to read than the other, older participants did not mention only plain language, but also the intention of the text and visual aspects, such as layout and colour. Below we report one extract from their short answers:

*P05: I prefer the manner on which it was set out, the text was better divided up and the matter more accessible than [sic] a large block of words.*

With regard to reading behaviour, for each text, older participants were asked to indicate what they would do if they were presented with it. They could select an option (ranging from Reading it in its entirety to Skip it altogether) or add another option. When looking at the number of selections per each option in the treatment group, we observed a widespread tendency to read only parts of the Terms and Conditions or to skim through them, regardless of whether they were written in plain language or not. However, in the case of non-simplified Terms and Conditions, reading behaviour seemed more varied, with one participant mentioning she would have to read them several times, and others stating that they would skip reading altogether, try reading but then give up, or abandon what they were doing (Fig. 4). In the control group, reading behaviour between texts was quite similar (Fig. 5), suggesting that it was plain language (and absence thereof) in the treatment group that influenced the reading behaviour of some participants:



**Fig. 4.** Reading behaviour in the treatment group



**Fig. 5.** Reading behaviour in the control group

Interestingly, reading behaviour with Terms and Conditions was also a theme in the focus group data, as shown in the extracts below:

*P01: I don't read them. I scroll down through them, and I tick the box 'I have read the terms and conditions' and I feel... Great...*

*P03: If it's something to do with terms and conditions, [...] I sometimes ask for those on hard copies because sometimes you need to read them, and then you need to re-read them, and then you need to re-read them...*

## 5 Conclusions

We conducted an exploratory investigation on the need for and impact of plain language among older adults reading online financial information. We observed that these were two under-researched aspects in the broader areas of web accessibility and web usability.

We found that applying plain language guidelines to Terms and Conditions extracted from the websites of financial institutions did not lead to improved reading comprehension, as assessed through multiple-choice questions. Furthermore, simplifying Terms and Conditions using plain language editing did not increase older people's perceptions of comprehensibility, nor their ratings of informativeness/helpfulness, understandability of language, and understandability of content. Bearing in mind that the benefits of plain language have been extensively discussed [21], results from our study might be due to the reduced number of participants, and to the fact that they were already familiar with the topic of direct debits. Further investigations with larger groups and more complex/unfamiliar texts are likely to highlight the benefits of plain language.

Qualitative data obtained through follow-up questions showed that language was not the only aspect valued by older people, as they also focused on visual aspects, such as layout and colour. The importance of visual aspects for older people (and users with disabilities) also emerged in Curran et al. [14]. The interplay between language and the non-linguistic aspects of texts should also be the object of follow-up research.

As far as reading behaviour is concerned, we found that, regardless of whether online Terms and Conditions were simplified or not, the general tendency among older people was to read some parts of them or just skim through them, depending on their needs. Similar findings are reported in Bakos et al. [3]. We also observed higher variability in terms of reading behaviour with non-simplified Terms and Conditions. Specifically, when presented with difficult texts, some older people seemed to either read them several times in order to understand them, or avoid reading them altogether. This result seems to indicate that plain language might have an impact on reading behaviour.

The importance of Terms and Conditions in financial agreements cannot be overstated, as these texts represent the basis of rational decisions and consumer protection [18]. While (older) people might be inclined to avoid reading Terms and Conditions, or skimming through them, this reading behaviour would result in them providing uninformed acceptance of agreements and, in turn, would leave them in a vulnerable position, at the mercy of financial institutions [26]. Our study highlighted the need for creating engaging and visually appealing Terms and Conditions/financial content to counteract what is known as *rational apathy*, which emerges when consumers believe that the costs of monitoring (reading) outweigh the expected benefits [7].

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